Client: Date: 1/7/2021 Project: Input by: Neal Baggett isDesign Address: Job Name: Beaumont Project # 2-Ply - DOES NOT PASS Level: Level Kerto-S LVL 1.750" X 13.000" BM4 1 1 SPF 2 Hanger (Not Found) 6'4" 6'4" **Member Information** Reactions UNPATTERNED Ib (Uplift) Application: Type: Floor Plies: 2 Design Method: ASD Moisture Condition: Dry **Building Code:** IBC/IRC 2015 Deflection LL: 480 Load Sharing: No Deflection TL: 360 Deck: Not Checked Importance: Normal - II Temp <= 100°F Temperature: **Bearings** Bearing Length Cap. React D/L lb Total Ld. Case 1-SPF 3.000" 517 / 1450 44% 1967 L

Brg	Live	Dead	Snow	Wind	Const
1	1450	517	0	0	0
2	1431	510	0	0	0

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2777 ft-lb	3'2 1/4"	23540 ft-lb	0.118 (12%)	D+L	L
Unbraced	2777 ft-lb	3'2\1/4"	15163 ft-lb	0.183 (18%)	D+L	L
Shear	1183 lb (1'3 1/4"	9707 lb	0.122 (12%)	D+L	L
LL Defl inch	0.016 (L/4634)	3'2 1/4"	0.150 (L/480)	0.100 (10%)	L	L
TL Defl inch	0.021 (L/3417)	3'2 1/4"	0.200 (L/360)	0.110 (11%)	D+L	L

Design Notes

1 Right end reaction 1941 greater than hanger resistance 1215: Duration Factor = 1

Design Notes

- 1 Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Fill all hanger nailing holes.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top loads must be supported equally by all plies.
- 6 Top braced at bearings.
- 7 Bottom braced at bearings.
- 8 Lateral slenderness ratio based on single ply width.

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

- LVL beams must not be cut or drilled Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code
- approvals

 Damaged Beams must not be used Design assumes top edge is laterally restrained
 Provide lateral support at bearing points to avoid
 lateral displacement and rotation
- 6. For flat roofs provide proper drainage to prevent ponding

Metsä Wood

This design is valid until 11/27/2023

Ld. Comb. D+L 2.500" 2 -26% 510 / 1431 1941 L D+L Hanger

Manufacturer Info

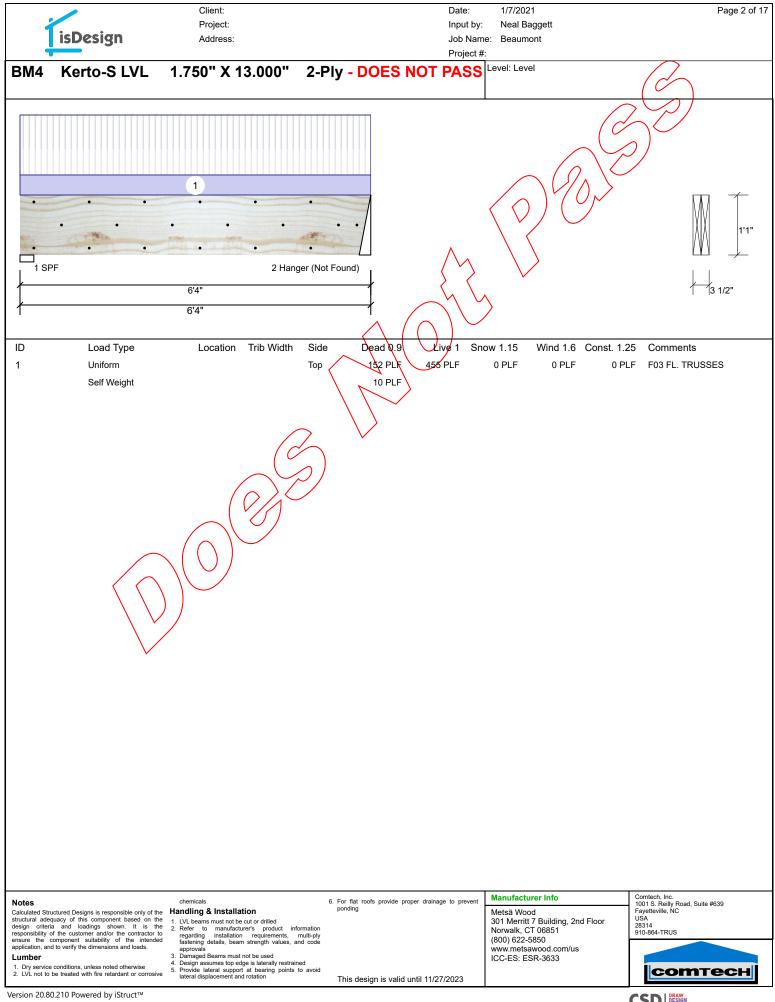
301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us ICC-ES: ESR-3633

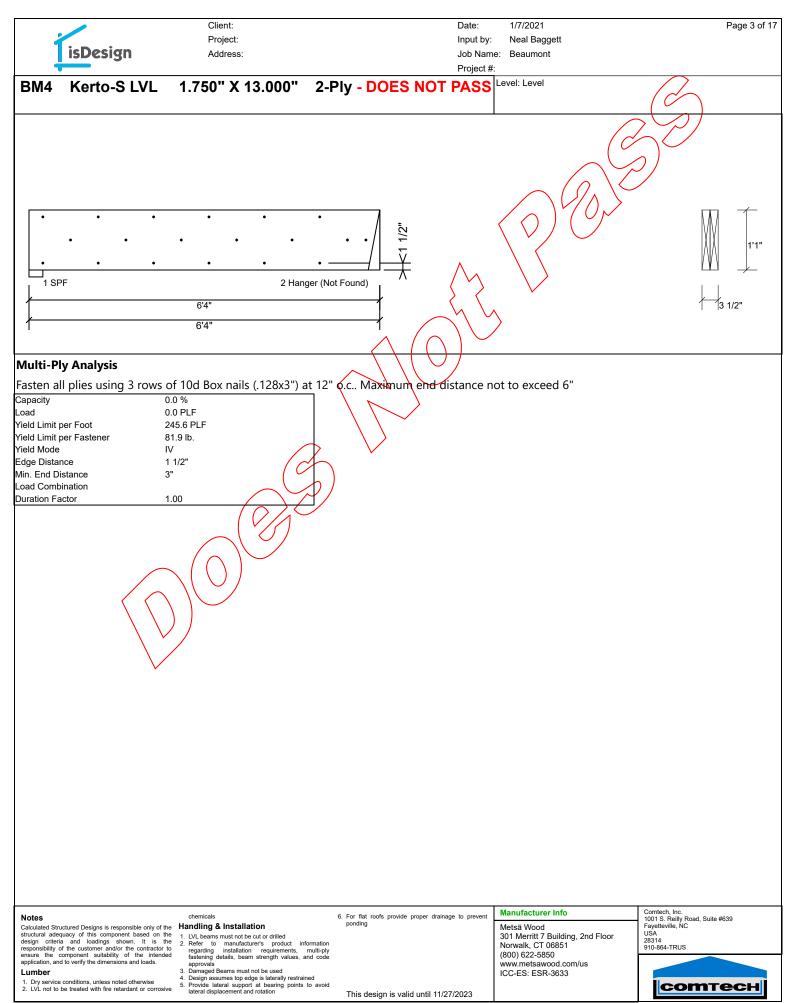
Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayetteville, NC USA 28314 910-864-TRUS



Page 1 of 17







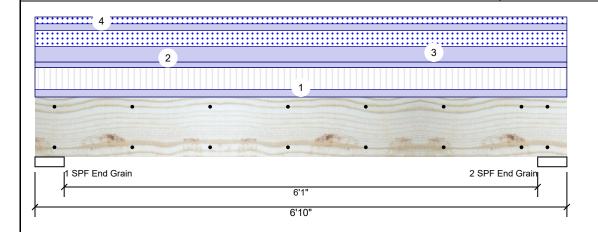


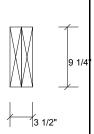
Date: 1/7/2021 Input by: Neal Baggett Job Name: Beaumont

Project #:

1.750" X 9.250" 2-Ply - PASSED Kerto-S LVL BM6

Level: Level





Page 4 of 17

Member Information

Type: Plies: 2 Moisture Condition: Dry Deflection LL: 480 Deflection TL: 360 Importance: Normal - II Temperature: Temp <= 100°F

Application: Design Method: ASD **Building Code: IBC/IRC 2015** Load Sharing: No Deck: Not Checked

Reactions UNPATTERNED Ib (Uplift) Brg Wind Const Live Dead Snow 1548 2508 1579 0 0 1 2 1548 2508 1579 0 0

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	6844 ft-lb	3'5"	14423 ft-lb	0.474 (47%)	D+0.75(L+S)	L
Unbraced	6844 ft-lb	3'5"	10370 ft-lb	0.660 (66%)	D+0.75(L+S)	L
Shear	3503 lb	1'1"	7943 lb	0.441 (44%)	D+0.75(L+S)	L
LL Defl inch	0.061 (L/1212)	3'5"	0.155 (L/480)	0.400 (40%)	0.75(L+S)	L
TL Defl inch	0.127 (L/586)	3'5"	0.207 (L/360)	0.610 (61%)	D+0.75(L+S)	L

Bearings

Grain

Bearing Length Cap. React D/L lb Total Ld. Case Ld. Comb. 1-SPF 4.500" 2508 / 2345 4853 L D+0.75(L+S) End Grain 2 - SPF 4.500" 2508 / 2345 4853 L D+0.75(L+S) End

Design Notes

- 1 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Top loads must be supported equally by all plies.
- 5 Top braced at bearings.
- 6 Bottom braced at bearings.
- 7 Lateral slenderness ratio based on single ply width.

	3	1 /								
ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Тор	151 PLF	453 PLF	0 PLF	0 PLF	0 PLF	F03 FL. TRUSSES
2	Uniform			Тор	114 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL ABOVE
3	Uniform			Тор	322 PLF	0 PLF	322 PLF	0 PLF	0 PLF	A03 RF. TRUSSES
4	Uniform			Far Face	140 PLF	0 PLF	140 PLF	0 PLF	0 PLF	M01 RF. TRUSSES
	Self Weight				7 PLF					

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

LVL beams must not be cut or drilled Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code

- approvals

 Damaged Beams must not be used
- Design assumes top edge is laterally restrained
 Provide lateral support at bearing points to avoid
 lateral displacement and rotation
- 6. For flat roofs provide proper drainage to prevent ponding

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us ICC-ES: ESR-3633

Manufacturer Info

Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayetteville, NC USA 28314 910-864-TRUS



Client: Project: Address: Date: 1/7/2021 Input by: Neal Baggett

Job Name: Beaumont

Level: Level

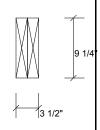
Project #:

Kerto-S LVL BM6

1.750" X 9.250"

2-Ply - PASSED

SPF End Grain 2 SPF End Grain 6'1"



Page 5 of 17

Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6"

6'10'

p	
Capacity	74.4 %
Load	140.0 PLF
Yield Limit per Foot	188.3 PLF
Yield Limit per Fastener	94.1 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	D+S
Duration Factor	1.15

Notes

NOtes
Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

- Handling & Installation

 1. UVI beams must not be cut or drilled

 2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

 3. Damaged Beams must not be used

 4. Design assumes top edge is laterally restrained

 5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us ICC-ES: ESR-3633

Manufacturer Info

Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayetteville, NC USA 28314 910-864-TRUS



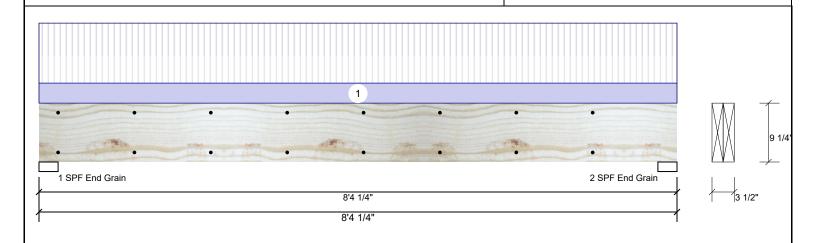


Date: 1/7/2021 Input by: Neal Baggett Job Name: Beaumont

Project #:

1.750" X 9.250" 2-Ply - PASSED Kerto-S LVL BM₃

Level: Level



Member Infor	mation			Reaction	ns UNPAT	TERNE	D lb (Uplift))	
Type:	Girder	Application:	Floor	Brg	Live	Dea	d Snow	V	Vind
Plies:	2	Design Method:	ASD	1	3254	111	6 0		0
Moisture Condition	n: Dry	Building Code:	IBC/IRC 2015	2	3254	111	6 0		0
Deflection LL:	480	Load Sharing:	No						
Deflection TL:	360	Deck:	Not Checked						
Importance:	Normal - II								
Temperature:	Temp <= 100°F								
				Bearing	s				
				Bearing	Length	Сар.	React D/L lb	Total	Ld. C
				1 - SPF	3.000"	48%	1116 / 3254	4370	L

Analysis F	Results
------------	---------

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	8326 ft-lb	4'2 1/8"	12542 ft-lb	0.664 (66%)	D+L	L
Unbraced	8326 ft-lb	4'2 1/8"	8569 ft-lb	0.972 (97%)	D+L	L
Shear	3367 lb	7'4 3/4"	6907 lb	0.488 (49%)	D+L	L
LL Defl inch	0.176 (L/544)	4'2 3/16"	0.199 (L/480)	0.880 (88%)	L	L
TL Defl inch	0.236 (L/405)	4'2 3/16"	0.266 (L/360)	0.890 (89%)	D+L	L

Design Notes

- 1 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Top loads must be supported equally by all plies.
- 5 Top braced at bearings.
- 6 Bottom braced at bearings.
- 7 Lateral slenderness ratio based on single ply width.

Bearings	5					
Bearing	Length	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	48%	1116 / 3254	4370	L	D+L
2 - SPF End Grain	3.000"	48%	1116 / 3254	4370	L	D+L

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments	
1	Uniform			Тор	260 PLF	779 PLF	0 PLF	0 PLF	0 PLF	F01 FL. TRUSSES	

Self Weight 7 PLF

NOtes
Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

Handling & Installation

1. UVI beams must not be cut or drilled

2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

3. Damaged Beams must not be used

4. Design assumes top edge is laterally restrained

5. Provide lateral support at bearing points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

This design is valid until 11/27/2023

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us ICC-ES: ESR-3633

Manufacturer Info

Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayetteville, NC USA 28314 910-864-TRUS



Page 6 of 17

Const

0

0



Client: Project: Address: Date: 1/7/2021 Input by: Neal Baggett Job Name: Beaumont

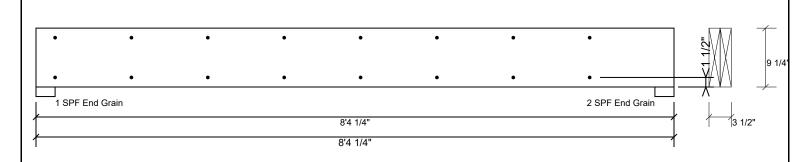
Project #:

Kerto-S LVL BM₃

1.750" X 9.250"

2-Ply - PASSED

Level: Level



Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6"

Capacity	0.0 %	
Load	0.0 PLF	
Yield Limit per Foot	163.7 PLF	
Yield Limit per Fastener	81.9 lb.	
Yield Mode	IV	
Edge Distance	1 1/2"	
Min. End Distance	3"	
Load Combination		
Duration Factor	1.00	

Notes

NOtes
Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

- Handling & Installation

 1. UVI beams must not be cut or drilled

 2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

 3. Damaged Beams must not be used

 4. Design assumes top edge is laterally restrained

 5. Provide lateral support at bearing points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us ICC-ES: ESR-3633

Manufacturer Info

Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayetteville, NC USA 28314 910-864-TRUS



Page 7 of 17

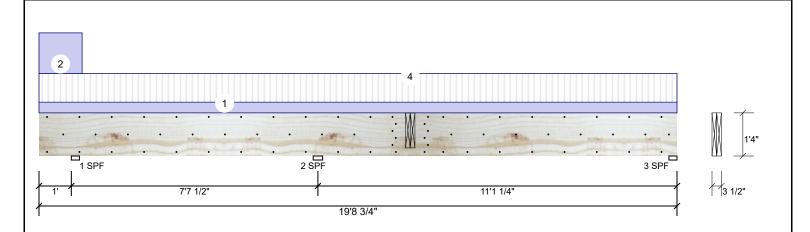


1/7/2021 Input by: Neal Baggett Job Name: Beaumont

Project #:

1.750" X 16.000" 2-Ply - PASSED **Kerto-S LVL** BM₂

Level: Level



Туре:	Girder
Plies:	2
Moisture Condition:	Dry
Deflection LL:	480
Deflection TL:	360
Importance:	Normal - II

Temp <= 100°F

Member Information

Application: Design Method: ASD **Building Code: IBC/IRC 2015** Load Sharing: No Deck: Not Checked

Reactions UNPATTERNED Ib (Uplift)						
Brg	Live	Dead	Snow	Wind	Const	
1	95	243	0	0	0	
2	2296	970	0	0	0	
3	619	286	0	0	0	

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.	
1 - SPF	3.000"	13%	231 / 366 597	' (-61)	LL_	D+L(D+L)	
2 - SPF	3.500"	64%	991 / 2355	3346	_LL	D+L	
3 - SPF	3.000"	20%	278 / 619	896	L_L	D+L	

Analysis Results

Temperature:

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-3529 ft-lb	8'7 1/2"	34565 ft-lb	0.102 (10%)	D+L	_LL
Unbraced	-3529 ft-lb	8'7 1/2"	11260 ft-lb	0.313 (31%)	D+L	_LL
Pos Moment	3125 ft-lb	12'4 7/8"	34565 ft-lb	0.090 (9%)	D+L	L_L
Unbraced	3125 ft-lb	12'4 7/8"	11260 ft-lb	0.278 (28%)	D+L	L_L
Shear	2263 lb	9'11 1/2"	11947 lb	0.189 (19%)	D+L	_LL
LL Defl inch	0.027 (L/4907)	13'5 15/16"	0.273 (L/480)	0.100 (10%)	L	L_L
TL Defl inch	0.037 (L/3512)	13'6 9/16"	0.364 (L/360)	0.100 (10%)	D+L	L_L
LL Cant	0.001 (2L/16428)	Lt Cant	0.200 (2L/480)	0.007 (1%)	L	L_L
TL Cant	0.002 (2L/12983)	Lt Cant	0.300 (2L/360)	0.006 (1%)	D+L	L_L

Design Notes

- 1 Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not
- $2\,$ Refer to last page of calculations for fasteners required for specified loads.
- 3 Concentrated load fastener specification is in addition to hanger fasteners if a hanger is
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top loads must be supported equally by all plies.
- 6 Tie-down connection required at bearing 1 for uplift 61 lb (Combination D+L, Load Case L).
- 7 Top braced at bearings.
- 8 Bottom braced at bearings.
- 9 Lateral slenderness ratio based on single ply width.

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

- LVL beams must not be cut or drilled
 Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

 2 Damaged Beams must not be used
- Design assumes top edge is laterally restrained
 Provide lateral support at bearing points to avoid
 lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us ICC-ES: ESR-3633

Manufacturer Info

Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayetteville, NC USA 28314 910-864-TRUS



Page 8 of 17



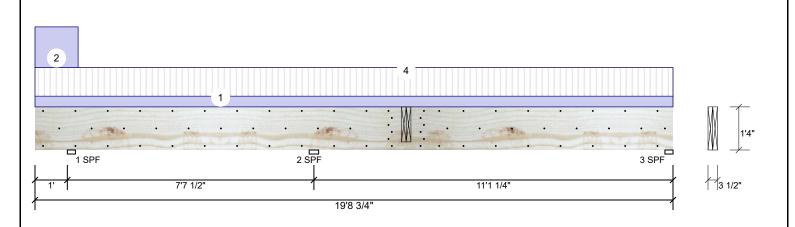


Date: 1/7/2021 Input by: Neal Baggett Job Name: Beaumont

Project #:

1.750" X 16.000" 2-Ply - PASSED **Kerto-S LVL BM2**

Level: Level



ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Тор	30 PLF	80 PLF	0 PLF	0 PLF	0 PLF	FL. LOADING
2	Part. Uniform	0-0-0 to 1-4-0		Тор	114 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL ABOVE
4	Point	11-5-12		Far Face	510 lb	1431 lb	0 lb	0 lb	0 lb	7'-FB. @ FOYER Brg 2
	Self Weight				12 PLF					

Notes

NOtes
Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

- Handling & Installation

 1. IVI beams must not be cut or drilled

 2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

 3. Damaged Beams must not be used

 4. Design assumes top edge is laterally restrained

 5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us ICC-ES: ESR-3633

Manufacturer Info

Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayetteville, NC USA 28314 910-864-TRUS



Page 9 of 17



1/7/2021 Input by: Neal Baggett

Job Name: Project #:

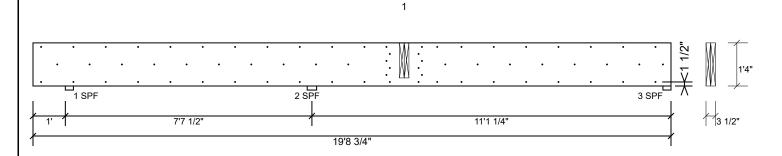
Kerto-S LVL BM₂

1.750" X 16.000"

2-Ply - PASSED

Level: Level

Beaumont



Multi-Ply Analysis

Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c.. except for regions covered by concentrated load fastening. Maximum end distance not to exceed 6"

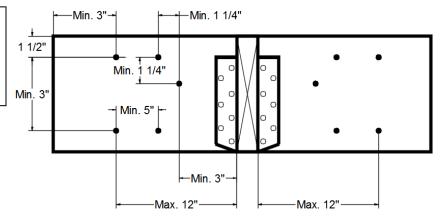
Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	245.6 PLF
Yield Limit per Fastener	81.9 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

Concentrated Load

Fasten at concentrated side load at 11-5-12 with a minimum of (12) - 10d Box nails (.128x3") in the pattern shown.

pattern snown.		
Capacity	98.8 %	
Load	970.7lb.	
Total Yield Limit	982.0 lb.	
Cg	0.9998	
Yield Limit per Fastener	81.9 lb.	
Yield Mode	IV	
Load Combination	D+L	
Duration Factor	1.00	

Min/Max fastener distances for Concentrated Side Loads



Notes

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

- LVL beams must not be cut or drilled Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code
- approvals

 Damaged Beams must not be used Design assumes top edge is laterally restrained
 Provide lateral support at bearing points to avoid
 lateral displacement and rotation
- For flat roofs provide proper drainage to prevent ponding

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us ICC-ES: ESR-3633

Manufacturer Info

Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayetteville, NC USA 28314 910-864-TRUS



Page 10 of 17



BM₅

Client: Project: Address: Date: 1/7/2021 Input by: Neal Baggett Job Name: Beaumont

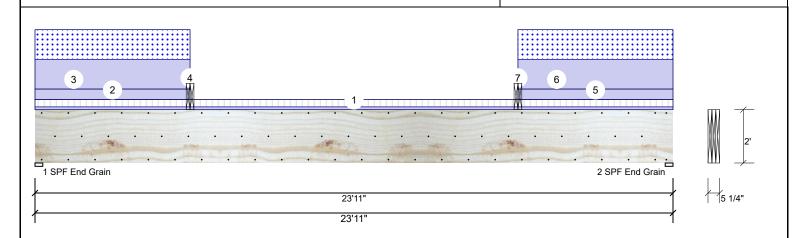
Project #:

2 - SPF 3.500"

End Grain

1.750" X 24.000" 3-Ply - PASSED **Kerto-S LVL**

Level: Level



Member Information Reactions UNPATTERNED Ib (Uplift) Application: Brg Wind Type: Floor Live Dead Snow Plies: 3 Design Method: ASD 957 5205 3791 0 1 Moisture Condition: Dry **Building Code: IBC/IRC 2015** 2 957 5205 3791 0 Deflection LL: 480 Load Sharing: Yes Deflection TL: 360 Deck: Not Checked Importance: Normal - II Temp <= 100°F Temperature: **Bearings** Bearing Length Cap. React D/L lb Total Ld. Case 1-SPF 3.500" 5205 / 3791 8996 L End Grain

Analysis Results	Ana	lysis	Resu	lts
------------------	-----	-------	------	-----

Moment 37841 ft-lb 11'11 1/2" 131295 ft-lb 0.288 (29%) D	•						
Unbraced 37841 ft-lb 11'11 1/2" 37957 ft-lb 0.997 (100%) D Shear 7185 lb 21'8 3/8" 30912 lb 0.232 (23%) D LL Defl inch 0.160 (L/1763) 11'11 9/16" 0.587 (L/480) 0.270 (27%) S	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Shear 7185 lb 21'8 3/8" 30912 lb 0.232 (23%) D LL Defl inch 0.160 (L/1763) 11'11 9/16" 0.587 (L/480) 0.270 (27%) S	Moment	37841 ft-lb	11'11 1/2"	131295 ft-lb	0.288 (29%)	D+0.75(L+S)	L
LL Defl inch 0.160 (L/1763) 11'11 9/16" 0.587 (L/480) 0.270 (27%) S	Unbraced	37841 ft-lb	11'11 1/2"	37957 ft-lb		D+0.75(L+S)	L
	Shear	7185 lb	21'8 3/8"	30912 lb	0.232 (23%)	D+S	L
TL Defl inch 0.378 (L/746) 11'11 9/16" 0.783 (L/360) 0.480 (48%) D	LL Defl inch	0.160 (L/1763)	11'11 9/16"	0.587 (L/480)	0.270 (27%)	S	L
	TL Defl inch	0.378 (L/746)	11'11 9/16"	0.783 (L/360)	0.480 (48%)	D+S	L

Design Notes

- 1 Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Top loads must be supported equally by all plies.
- 5 Top must be laterally braced at a maximum of 7'1 1/8" o.c.
- 6 Bottom braced at bearings.

ı	/ Lateral slende	rness ratio based of	n single ply width.								
I	ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
ı	1	Uniform			Тор	30 PLF	80 PLF	0 PLF	0 PLF	0 PLF	FL. LOADING
ı	2	Part. Uniform	0-0-0 to 5-9-12		Тор	114 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL ABOVE
ı	3	Part. Uniform	0-0-0 to 5-9-12		Тор	322 PLF	0 PLF	322 PLF	0 PLF	0 PLF	A01 RF. TRUSSES
	4	Point	5-9-12		Тор	1977 lb	0 lb	1919 lb	0 lb	0 lb	13'-FB. @ PLAY ROOM Brg 1
ı	5	Part. Uniform	18-1-4 to 23-11-0		Тор	114 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL ABOVE

Continued on page 2...

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- LVL beams must not be cut or drilled Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals Damaged Beams must not be used

- Design assumes top edge is laterally restrained
 Provide lateral support at bearing points to avoid
 lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us ICC-ES: ESR-3633

Manufacturer Info

5205 / 3791

8996 L

Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayetteville, NC USA 28314 910-864-TRUS



Page 11 of 17

Const

0

0

Ld. Comb.

D+S

D+S

This design is valid until 11/27/2023 CSD BESIGN

BM5

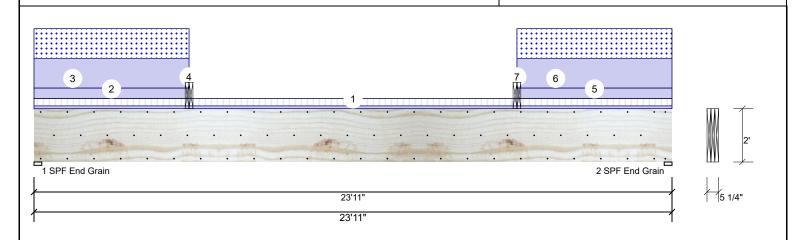
Client: Project: Address:

Date: 1/7/2021 Input by: Neal Baggett Job Name: Beaumont

Project #:

1.750" X 24.000" 3-Ply - PASSED **Kerto-S LVL**

Level: Level



Continued	from	page	1
-----------	------	------	---

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
6	Part. Uniform	18-1-4 to 23-11-0		Тор	322 PLF	0 PLF	322 PLF	0 PLF	0 PLF	A01 RF. TRUSSES
7	Point	18-1-4		Тор	1977 lb	0 lb	1919 lb	0 lb	0 lb	13'-FB. @ PLAY ROOM Brg 2

Self Weight 28 PLF

Notes

NOtes
Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

- Handling & Installation

 1. IVI beams must not be cut or drilled

 2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

 3. Damaged Beams must not be used

 4. Design assumes top edge is laterally restrained

 5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us ICC-ES: ESR-3633

Manufacturer Info

Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayetteville, NC USA 28314 910-864-TRUS



Page 12 of 17



Client: Project: Address:

1/7/2021 Input by: Neal Baggett Job Name: Beaumont

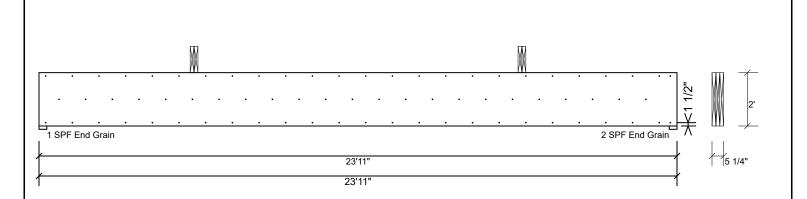
Project #:

Kerto-S LVL BM5

1.750" X 24.000"

3-Ply - PASSED

Level: Level



Multi-Ply Analysis

Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c.. Nail from both sides. Maximum end distance not to exceed

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	245.6 PLF
Yield Limit per Fastener	81.9 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1 00

Notes

NOtes
Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

- Informing & Installation

 I. VIL beams must not be cut or drilled

 Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

 Damaged Beams must not be used

 Design assumes top edge is laterally restrained

 Design assumes top edge is laterally restrained is provide lateral support at bearing points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us ICC-ES: ESR-3633

Manufacturer Info

Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayetteville, NC USA 28314 910-864-TRUS



Page 13 of 17

This design is valid until 11/27/2023 CSD DESIGN

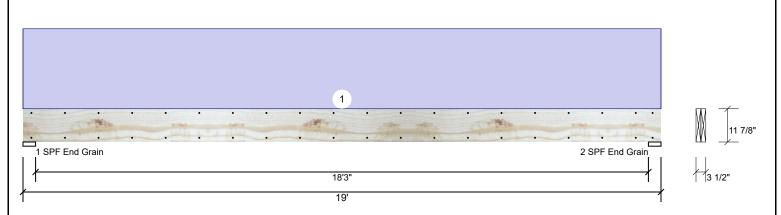


1/7/2021 Input by: Neal Baggett Job Name: Beaumont

Project #:

1.750" X 11.875" 2-Ply - PASSED **Kerto-S LVL GDH**

Level: Level



Member Infor	mation						Reaction	ns UNPAT	TERNE	D lb (Uplift))		
Type:	Girder		Applicat	ion:	Floor		Brg	Live	Dead	l Snow	,	Wind	Const
Plies:	2		Design I	Method:	ASD		1	0	2016	0		0	0
Moisture Conditio	n: Dry		Building	Code:	IBC/IRC 2015		2	0	2016	0		0	0
Deflection LL:	480		Load Sh	aring:	No								
Deflection TL:	360		Deck:		Not Checked								
Importance:	Normal - II												
Temperature:	Temp <= 10	0°F											
							Bearing	s					
							Bearing	Length	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb
							End	4.500"	15%	2016 / 0	2016	Uniform	D
Analysis Resul	ts						Grain						
Analysis A	ctual	Location	Allowed	Capacity	Comb.	Case	2 - SPF	4.500"	15%	2016 / 0	2016	Uniform	D
Moment 89	957 ft-lb	9'6"	17919 ft-lb	0.500 (509	%) D	Uniform	End Grain						
Unbraced 89	957 ft-lb	9'6"	8966 ft-lb	0.999 (100%)	D	Uniform							

Uniform

Uniform

Design Notes

Shear

1 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".

0.218 (22%) D

0 999.000 (L/0) 0.000 (0%)

9'6 1/16" 0.612 (L/360) 0.950 (95%) D

17'8 3/8" 7980 lb

- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Top loads must be supported equally by all plies.
- 5 Top must be laterally braced at a maximum of 10'4 1/8" o.c.
- 6 Bottom braced at bearings.

1740 lb

LL Defl inch 0.000 (L/999)

TL Defl inch 0.582 (L/379)

7 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments	
1	Uniform			Тор	203 PLF	0 PLF	0 PLF	0 PLF	0 PLF	END WALL / GABLE	
	Self Weight				9 PLF						

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- LVL beams must not be cut or drilled
 Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

 2 Damaged Beams must not be used
- Danaged Beams must not be used
 Design assumes top edge is laterally restrained
 Provide lateral support at bearing points to avoid
 lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us ICC-ES: ESR-3633

Manufacturer Info

Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayetteville, NC USA 28314 910-864-TRUS



Page 14 of 17

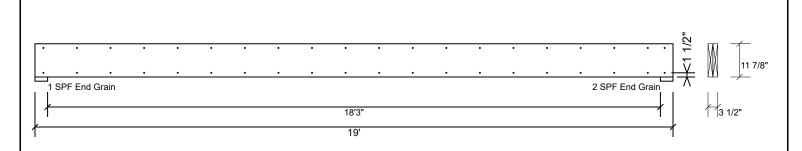
Client: Project: Address:

1/7/2021 Input by: Neal Baggett Job Name: Beaumont

Project #:

1.750" X 11.875" 2-Ply - PASSED **Kerto-S LVL GDH**

Level: Level



Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6"

rasterrain pries asing E	TOWS OF TOO BOX Halls (.TEOXS) at
Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	163.7 PLF
Yield Limit per Fastener	81.9 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

Notes

NOtes
Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

- Handling & Installation

 1. UVI beams must not be cut or drilled

 2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

 3. Damaged Beams must not be used

 4. Design assumes top edge is laterally restrained

 5. Provide lateral support at bearing points to avoid lateral displacement and rotation

- This design is valid until 11/27/2023

6. For flat roofs provide proper drainage to prevent ponding

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us ICC-ES: ESR-3633

Manufacturer Info

Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayetteville, NC USA 28314 910-864-TRUS



Page 15 of 17



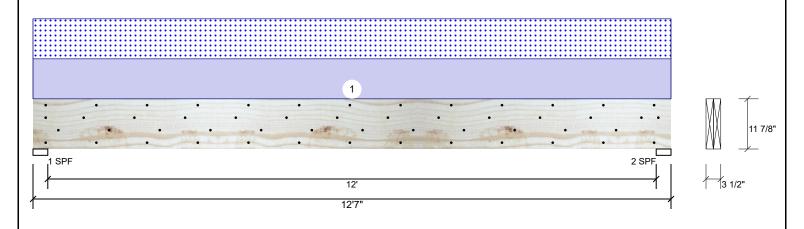


1/7/2021 Input by: Neal Baggett Job Name: Beaumont

Project #:

Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED BM1

_evel: Level



Member Info	mation			Reaction	ns UNPAT	TERNED IL	(Uplift)			
Type:	Girder	Application:	Roof	Brg	Live	Dead	Snow	Wind	Const	
Plies:	2	Slope:	0/12	1	0	1977	1919	0	0	
Moisture Condition	n: Dry	Design Method:	ASD	2	0	1977	1919	0	0	
Deflection LL:	360	Building Code:	IBC/IRC 2015							
Deflection TL:	240	Load Sharing:	No							
Importance:	Normal - II	Deck:	Not Checked							
Temperature:	Temp <= 100°F									
				Bearing	gs					
				Bearing	g Length	Cap. Rea	ct D/L lb	Total Ld. Cas	e Ld. Comb.	
				1 - SPF	3.500"	75% 197	77 / 1919	3896 L	D+S	

2 - SPF 3.500"

75%

1977 / 1919

3896 L

D+S

Analysis Results

•						
Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	11380 ft-lb	6'3 1/2"	22897 ft-lb	0.497 (50%)	D+S	L
Unbraced	11380 ft-lb	6'3 1/2"	11401 ft-lb	0.998 (100%)	D+S	L
Shear	3745 lb	1'2 5/8"	10197 lb	0.367 (37%)	D+S	L
LL Defl inch	0.167 (L/869)	6'3 1/2"	0.404 (L/360)	0.410 (41%)	S	L
TL Defl inch	0.340 (L/428)	6'3 1/2"	0.606 (L/240)	0.560 (56%)	D+S	L

Design Notes

- 1 Fasten all plies using 4 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Top must be laterally braced at a maximum of 7'9" o.c.
- 5 Bottom braced at bearings.
- 6 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments	
1	Uniform			Far Face	305 PLF	0 PLF	305 PLF	0 PLF	0 PLF	A02 RF. TRUSSES	
	Self Weight				9 PLF						

NOtes
Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

- Informing & Installation

 I. VIL beams must not be cut or drilled

 Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

 Damaged Beams must not be used

 Design assumes top edge is laterally restrained

 Design assumes top edge is laterally restrained is provide lateral support at bearing points to avoid lateral displacement and rotation
- For flat roofs provide proper drainage to prevent ponding

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us ICC-ES: ESR-3633

Manufacturer Info

Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayetteville, NC USA 28314 910-864-TRUS



Page 16 of 17

Client: Project: Address:

1/7/2021 Input by: Neal Baggett

Project #:

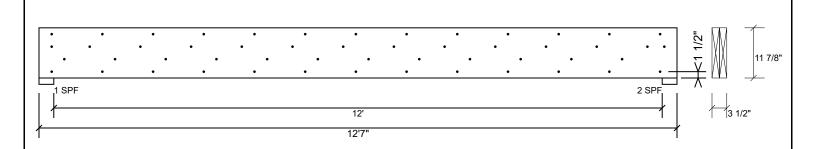
Kerto-S LVL BM1

1.750" X 11.875"

2-Ply - PASSED

_evel: Level

Job Name: Beaumont



Multi-Ply Analysis

Fasten all plies using 4 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6"

	•
Capacity	81.0 %
Load	305.0 PLF
Yield Limit per Foot	376.5 PLF
Yield Limit per Fastener	94.1 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	D+S
Duration Factor	1.15

Notes

NOtes
Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

- Handling & Installation

 1. UVI beams must not be cut or drilled

 2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

 3. Damaged Beams must not be used

 4. Design assumes top edge is laterally restrained

 5. Provide lateral support at bearing points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us ICC-ES: ESR-3633

Manufacturer Info

Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayetteville, NC USA 28314 910-864-TRUS



Page 17 of 17